



Brocade M-EOS v9.9.6

Release Notes v1.0

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Overview

Brocade M-EOS v9.9.5 is a maintenance release providing fixes for defects and minor enhancements. M-EOSn v9.9.5 adds support for DCFM management of M-series fabrics without the need to have a FOS-based product in the fabric. This capability will be supported with specific versions of DCFM software. Contact your vendor for more information on the minimum DCFM software version for this support.

Supported Products

Table 1 Brocade Names for Legacy McDATA Products

Brocade Names	Legacy McDATA Names
Brocade EFCM	EFCM
Brocade M-EOS	E/OS
Brocade M-EOSn	E/OSn
Brocade M6140 Director	Intrepid 6140 (ED-6140)
Brocade M4700F Switch	Sphereon 4700
Brocade Mi10K Director	Intrepid 10000 Director (i10K)

M-EOS firmware v9.9.6, part number 53-1000638-39, is supported on the following products:

- M6140
- Intrepid 6064
- Sphereon 3232
- Sphereon 4300 (first and second-generation)
- Sphereon 4400
- Sphereon 4500 (first and second-generation)
- Sphereon 4700

Important Notes

This section contains information that you should consider before you use this firmware release.

Frame Redirection

M-EOS switches may exhibit a behavior where they block all attached devices with a reason indication of “Blocked Temporarily, Internal”. Users that experience this may have power cycled the M-series switch while it was participating in a fabric with Frame Redirection zoning, a capability used for FOS-based application or encryption services. If the switch is still participating in the fabric with Frame Redirection, issue the “cfigsave” command from a Brocade FOS-based switch with the Frame Redirection zone in its defined zone database. If the M-EOS switch is no longer attached to the fabric with Frame Redirection zoning, issue the “Config.Zoning.deleteSplZoneSet” command via CLI to the M-EOS switch. This issue is documented as defect 258450.

Defects addressed in M-EOS v9.9.6

For the list of defects addressed in this release, refer to Table 4 of this document.

This document includes updates on the pre-requisites for installing and using M-EOS v9.9.6. (For details, refer *Prerequisites for Installing and Using M-EOS 9.9.6*, page 8). For current NPIV and fabric scalability limits for M-series products, refer to the *Brocade Scalability Guidelines* document, available under the *Technology and Architecture Resources* section at <http://www.brocade.com/compatibility>.

Upgrade and Downgrade Considerations

The following tables show allowed firmware upgrade and downgrade migrations using either the EFCM Basic (Embedded Web Server) HTTP management interface or EFCM. To determine if a specific migration is supported, simply look at the table for the appropriate interface, find the version of M-EOS code that is currently in use on the left axis of the matrix, and then find the intersection with the version of M-EOS that is going to be loaded on the switch on the top axis. The intersection will indicate a “Y” if it is a supported migration or “N” if it is not supported or allowed.

Table 2 - Migration Matrix for EFCM Basic (Embedded Web Server (EWS), for releases 9.0.0 to 9.1.3, reference the M-EOS 9.9.3 release note.)

	9.6	9.6.1	9.6.2	9.7	9.7.1	9.7.2	9.8	9.8.1	9.9	9.9.2	9.9.3	9.9.5	9.9.6
9.6	Y	Y	Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.6.1		Y	Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.6.2			Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.7				Y	Y	Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.7.1					Y	Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.7.2						Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.8							Y	Y	Y3	Y3	Y3	Y3	Y3
9.8.1								Y	Y3	Y3	Y3	Y3	Y3
9.9									Y	Y	Y	Y	Y
9.9.2										Y	Y	Y	Y
9.9.3											Y	Y	Y
9.9.5												Y	Y
9.9.6													Y

Notes:

- 1 Downgrade NOT allowed if QPM cards are present.
- 2 Downgrade NOT allowed if RD zones are present.
- 3 Downgrade NOT allowed if it is in Open Fabric Mode with RD Zones present.

Table 3 - Migration Matrix for EFCM (as of EFCM v9.7.4), for releases 9.0.0 to 9.1.3, reference the M-EOS 9.9.3 release note.)

	9.6	9.6.1	9.6.2	9.7	9.7.1	9.7.2	9.8	9.8.1	9.9	9.9.2	9.9.3	9.9.5	9.9.6
9.6	Y	Y	Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.6.1		Y	Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.6.2			Y	Y	Y	Y	Y ²	Y ²	N	N	N	N	N
9.7				Y	Y	Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.7.1					Y	Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.7.2						Y	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
9.8							Y	Y	Y3	Y3	Y3	Y3	Y3
9.8.1								Y	Y3	Y3	Y3	Y3	Y3
9.9									Y	Y	Y	Y	Y
9.9.2										Y	Y	Y	Y
9.9.3											Y	Y	Y
9.9.5												Y	Y
9.9.6													Y

Notes:

- 1 Downgrade NOT allowed if QPM cards are present.
- 2 Downgrade NOT allowed if RD zones are present.
- 3 Downgrade NOT allowed if it is in Open Fabric Mode with RD Zones present.

Additional notes describes the upgrade and downgrade considerations while migrating to or from previous releases of M-EOS.

- All products must be running E/OS 9.6 or higher before upgrading to M-EOS v9.9.6. If a product is operating with a firmware level below 9.0, you must upgrade to version 9.6 or later version before installing M-EOS v9.9.6
To downgrade to a release previous to 9.0, you must first downgrade to a 09.xx.xx release lower than 9.6.
- M-EOS v9.9.6 requires EFCM v9.7 or higher. EFCM must be at the minimum level before installing the new M-EOS firmware. Note that EFCM is not required, but is recommended for operating hardware products using M-EOS.
- For procedures to download firmware to a switch or director using the EFCM Basic interface, refer to the following:
 - EFCM Basic User Manual. See *Related Documentation*, page 10, for a list of manuals and part numbers.
 - EFCM Basic online help.
- Upgrading to M-EOS v9.9.6 is non-disruptive for attached devices. Limitations to upgrades or downgrades are clearly

identified to the user if there are any limitations in performing the operation.

- The switch or director is not required to be offline before performing an upgrade or downgrade operation.
- Some customer environments use application or host software that may be affected by the restart of the CTP during a HotCAT download operation. Applications that rely on inband management servers are especially prone to problems caused by processor restart.

As a solution, shut down those applications driving inband requests before a firmware upgrade, and then restart the applications after the upgrade is complete.

For example, an environment that uses Resource Measurement Facility (RMF) for Fibre Connection (FICON) may be configured to poll the director or switch at regular intervals. The polling process could occur during a restart period, causing the RMF application software to react adversely. If a restart occurs while an inband request is pending, host programming may change the status of the director or switch control unit port (CUP) to inaccessible or boxed.

- **Before upgrading or downgrading firmware, it is highly recommended that you back up the switch or director configuration in case of a failure.**
- EFCM provides an automated backup and restore process. Refer to Chapter 1 in your switch or director Element Manager User Manual under *Backing Up and Restoring Product Manager Data* for more details.
- For configuration backup and restore procedures using EFCM Basic, refer to Chapter 7, *Maintenance Tasks*. Note that a standalone Configuration Backup and Restore (CBR) utility is also available for these operations.
- If a Mi10K Director is in a fabric, all Sphereon switches, Intrepid 6064 directors, and M6140 directors in the fabric must be upgraded to M-EOS 9.x or later.

Prerequisites for Installing and Using M-EOS v9.9.6

Other legacy McDATA products in the same fabric as M-EOS v9.9.6 must be at a minimum revision level for proper fabric operation. The minimum firmware level for all M-EOS-based products should be M-EOS v9.6. But, it is recommended that you upgrade to the latest shipping versions of each release (check with Brocade Customer Support for latest version).

Although products may co-exist in a fabric running different levels of M-EOS firmware, all products must be at the same major functional release level for optimum fabric stability and robustness.

Standards Compliance

- M-EOS v9.9.6 is compliant with the following Fibre Channel protocols:
 - FC-GS-3 (excepting FC4 Features and FC4 Descriptors commands)
 - FC-FG
 - FC-SW-2
 - FC-MI
 - FC-PH Rev 4.3
 - FC-PH-2
 - FC-PH-3
 - FC-GS-2
 - FC-FLA
- M-EOS v9.9.6 is compliant with the Fibre Channel Element MIB (FE-MIB).
- M-EOS v9.9.6 is compliant with the following MIB-II groups:

- System
 - Interface
 - Address Translation
 - IP
 - ICMP
 - TCP
 - UDP
 - SNMP
- M-EOS v9.9.6 is compliant with the following FC classes of service:
 - Class 2
 - Class 3
 - Class F

Using EFCM Basic

EFCM Basic requires Internet Explorer 6 or Netscape 7 to run properly. When you use Internet Explorer version 5.00.3315.1000x, the firmware download operation may not complete and may eventually time-out leaving the switch with the previous version of M-EOS.

Supported Configurations

For information on supported configurations, reference the *Brocade M-Series Fabric Guidelines* publication. The most recent version of documentation is provided on the Brocade Web site, through Brocade Connect. Go to <http://www.brocade.com> and click Brocade Connect to register at no cost for a user ID and password.

Information contained in this publication includes:

- Guidelines for configuring maximum end ports, unique zone members, ISLs per switch, members per zone, zones, devices supported, and switch types per fabric.
- Supported fabrics containing one to eight switches.
- Supported fabrics containing nine to thirty one switches.
- Fabric topology examples.

M-EOS v9.9.6 was qualified with 31 domains containing directors, switches, and 2048 devices. The core consisted of four M6140s and/or Mi10K Directors with other directors and switches on the edge. The Intrepid 6064 was not introduced in the core of any of these fabrics due to performance limitations. The Intrepid 6064 and Sphereon 3xxx family of switches are only qualified as edge products in fabric configurations over 24 switches.

Related Documentation

The following documents provide additional support and information pertaining to M-EOS v9.9.6:

- Element Manager User Manual for your switch or director product:
 - Intrepid 6064 and M6140 Director
 - Sphereon 3232 Switch
 - Sphereon 4500 Switch
 - Sphereon 4400 Switch
 - Sphereon 4700 Switch

- Installation and Service Manual for your switch or director product:
 - Sphereon 3232 Switch
 - Sphereon 4300 Switch
 - Sphereon 4400 Switch
 - Sphereon 4700 Switch
 - Sphereon 4500 Switch
 - Intrepid 6064 Director
- M6140 Director
- EFC Manager Software User Manual
- M-EOS Command Line Interface User Manual
- M-EOS SNMP Support Manual
- EFCM Basic User Manual
- SANplicity Wizard Backing Up And Restoring Switch And Director Configurations

Previous M-EOS and E/OS Releases

The most recent version of documentation is provided on the Brocade Web site, through Brocade Connect.

Go to <http://www.brocade.com> and click Brocade Connect to register at no cost for a user ID and password.

Closed with Code Change in M-EOS v9.9.6

M-EOS v9.9.6 contains all code changes included in that version and prior releases. Code changes for M-EOS v9.9.6 fixes are organized by their Defect Number.

Table 4 - Closed with code changes in M-EOS v9.9.6

Defect ID: DEFECT000269240	Technical Severity: Medium
Summary: Zone config removal from Brocade DCFM to Brocade DCX running FOS v6.2.0g yields SFC reject from M-EOS switches in fabric and failure "blocked by another transaction".	
Symptom: When saving the configuration from Brocade DCFM, domain 20 (FOS switch) pushes the configuration to all defined DB supported switches including M6140s (domain 3 and 11) and not to Intrepid 6064s (domain 11, 12, 13 and 14). Since we have a problem in M-EOS FR supported switches, only domain 3 and 11 rejected SFC and causing configuration save operation failure at DCFM	
Feature: SUSTAINING ENGINEERING	Function: Zoning
Probability: Medium	Found in Release: eos 9.9.0

Defect ID: DEFECT000263832	Technical Severity: Medium
Summary: M6140 running M-EOS v9.6.2 code 411 firmware fault with C0 event data. Issue is not related to taking a Data Collection	
Symptom: CTP faulted and switchover occurred after unblocking a port	
Feature: SUSTAINING ENGINEERING	Function: DATA COLLECTION AND LOGGING
Probability: Low	
Found in Release: eos 9.6.2	Service Request ID: 400335

Defect ID: DEFECT000243970	Technical Severity: Medium
Summary: M-EOS switch displaying no info on Embedded Web Server (EWS) for certain optics.	
Symptom: When displaying certain optics on a M-EOS switch running M-EOS v9.8.1, the display contains no info on EWS screen	
Feature: SUSTAINING ENGINEERING	Function: Optics
Probability: Medium	
Found in Release: eos 9.8.0	Service Request ID: 365099

Defect ID: DEFECT000264443	Technical Severity: High
Summary: Brocade M6140 switch, running M-EOS v9.8.1 appears to have suffered a C0 FW fault Event 411 due to a data collection	
Symptom: C0 fault caused by a data collection and is indicative of the issue reputed to be resolved in M-EOS 9.7.	
Feature: SUSTAINING ENGINEERING	Function: DATA COLLECTION AND LOGGING
Probability: TBD	
Found in Release: eosc 9.8.0	Service Request ID: 399369

Closed with Code Change in M-EOS v9.9.5

M-EOS v9.9.5 contains all code changes included in that version and prior releases. Code changes for M-EOS v9.9.5 fixes are organized by their Defect Number.

Table 5 - Closed with code changes in M-EOS v9.9.5

Defect ID: DEFECT000245147	Technical Severity: Medium
Summary: Line speed unknown when set to 10/half	
Symptom: When line speed changed to 10/half “Line Speed” field shows as “Unknown”.	
Feature: SUSTAINING ENGINEERING	Function: CLI
Probability: Medium	Risk of Fix: Low
Found in Release: eos9.7.2	Service Request ID: 366529

Defect ID: DEFECT000245321	Technical Severity: Medium
Summary: Brocade M6140 running M-EOS v9.8.1 code, 411 firmware fault with event data of 80 48.	
Symptom: CTP failure and firmware fault event 411 in event log.	
Feature: SUSTAINING ENGINEERING	Function: High Availability
Probability: Low	
Found in Release: eos9.8.0	Service Request ID: 373073

Defect ID: DEFECT000245979	Technical Severity: Critical
Summary: Customer has 2 M6140s where the backup CTP is in a rolling reboot producing 411 firmware faults with C0 event data.	
Symptom: Backup CTP failures.	
Feature: SUSTAINING ENGINEERING	Function: IP/IPv6
Probability: Low	
Found in Release: eos9.7.1	Service Request ID: 373841

Defect ID: DEFECT000257720	Technical Severity: Medium
Summary: RS232/Serial port is streaming MS_ROUTER_PRIVATE::_ms_process_logo messages.	
Symptom: The RS232/Serial port is streaming MS_ROUTER_PRIVATE::_ms_process_logo messages, making it hard for the customer to run commands.	
Feature: SUSTAINING ENGINEERING	Function: Logging
Probability: Medium	
Found in Release: eos9.7.2	Service Request ID: 379397

Closed with Code Change in M-EOS v9.9.3

M-EOS v9.9.5 contains all code changes included in that version and prior releases. Code changes for M-EOS v9.9.3 fixes are organized by their Defect Number.

Table 6 - Closed with code changes in M-EOS v9.9.3

Defect ID: DEFECT000256930	Technical Severity: High
Summary: Zone activation failing with a 0x3c reason code (invalid number of zone members)	
Symptom: The customer upgraded their fabric from 9.7.2 to 9.9.1 and could no longer activate their zoneset..	
Feature: SUSTAINING ENGINEERING	Function: FCLC
Probability: Low	
Found in Release: eosc9.9.0, impacts 9.9.0, 9.9.1, 9.9.2	Service Request ID: 384387

Closed with Code Change in M-EOS v9.9.2

M-EOS v9.9.2 contains all code changes included in that version and prior releases. Code changes for M-EOS v9.9.2 fixes are organized by their Defect Number.

Table 7 - Closed with code changes in M-EOS v9.9.2

Defect ID: DEFECT000244399	Technical Severity: High
Summary: M-EOS switch blocking PLOGI accept on remote end because near end did not send SW_RSCN before PLOGI	
Symptom: Server bootup slow on both Qlogic and Emulex adapters.	
Feature: Fabric Services	Function: Zoning
Probability: Low	
Found in Release: eos9.6.2	

Defect ID: DEFECT000233176	Technical Severity: High
Summary: Frames (PDISC) are getting dropped in M-EOS with FR when one of the destination storage ports is disabled during DMM Testing	
Symptom: DMM runs on the Brocade 7600 connected to M-EOS based switch and configured with interopmode 2. DMM prepares FR zones for source and destination storage target ports with corresponding redirect targets and initiators. We have tests where the active host IOs are issued on the LUNs from source target port during and after the FR zones are created and activated. When one of the destination target ports is disabled, host fails to see the source target LUNs and IO's error on the host side.	
Workaround: By disabling and enabling the host ports, we could get back the source luns.	
Feature: Fabric Services	Function: FC TRACE ROUTE
Probability: High	
Found in Release: eos9.8.0	

Defect ID: DEFECT000240830	Technical Severity: Medium
Summary: Ports 0,2,18,20,24,28 and 54 are not show up as logged in ports but devices are running on these ports	
Symptom: Customer notes that ports 0,2,18,20,24,28 and 54 show no FCID. The customer shows active, current traffic on all these ports and states there is not disruption seen on the hosts that connect to these ports. It appears to be a reporting issue.	
Workaround: Blocked/unblocked ports to recover	
Feature: Fabric Services	Function: Name Server
Probability: Low	
Found in Release: eos9.6.1	Service Request ID: 365377

Defect ID: DEFECT000241076	Technical Severity: Medium
Summary: Node descriptor returns wrong protocol type	
Symptom: Interface Protocol Type is incorrect for NS0	
Feature: FICON	Function: FICON
Probability: High	
Found in Release: eos9.6.1	

Defect ID: DEFECT000238323	Technical Severity: Medium
Summary: 411 firmware fault, SS_FAULT (00000073,*0182e198,00000118).	
Symptom: Firmware Fault (411)	
Feature: SUSTAINING ENGINEERING	Function: OSMS
Probability: Low	
Found in Release: eos9.8.0	Service Request ID: 360687

Defect ID: DEFECT000238053	Technical Severity: Medium
Summary: Audit log user ID payload data is in inconsistent format for M6140 and M4500	
Symptom: The Audit log entries show EFCM server IP as 0.0.0.0	
Feature: EMBEDDED MANAGEMENT	Function: LOGGING
Probability: High	
Found in Release: eos9.7.0	

Defect ID: DEFECT000238528	Technical Severity: Medium
Summary: No dd alarm threshold information	
Symptom: The customer is getting 516's after they upgrade a M6140 to M-EOS 9.7.2 on a 10gig isl and there is not any information on the alarm.	
Feature: Embedded Management	Function: Logging
Probability: Low	
Found in Release: eos9.7.2	Service Request ID: 361307